INTEGRATED POWER DELIVERY WITH FLEX CIRCUIT INTERCONNECTION FOR HIGH DENSITY HIGH POWER CIRCUITS FOR INTEGRATED CIRCUITS AND SYSTEMS

ABSTRACT OF THE DISCLOSURE

A method and apparatus for electrically interconnecting a first circuit board having a power conditioning circuit and a second circuit board having a power dissipating component disposed therebelow along a z (vertical) axis is disclosed. In an illustrative embodiment, the apparatus comprises a first flexible circuit having a first set of raised conductive contacts, the first flexible circuit disposed on a first side of the second circuit board; and a second flexible circuit having a second set of raised conductive contacts, the second flexible circuit disposed on a second side of the second circuit board opposing the first side of the second circuit board. A power signal from the power conditioning circuit is provided to the second circuit board at least in part by one of the first set of raised conductive contacts on the flexible circuit and the second set of raised conductive contacts on the second flexible circuit and a ground return is provided to the second circuit board by the other of the first set of raised conductive contacts on the first flexible circuit and the second set of raised conductive contacts on the second flexible circuit.

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